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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,352	09/16/2003	Michael Y. Frankel	4450-0403P	2063

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EXAMINER	
BLEVINS, JERRY M	
ART UNIT	**PAPER NUMBER**
2883	

DATE MAILED: 03/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/662,352	FRANKEL, MICHAEL Y.	
	Examiner	Art Unit	
	Jerry Martin Blevins	2883	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 January 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) *17* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 September 2003* is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Examiner accepts amendment to the abstract. Prior objection to the abstract is withdrawn.

Applicant's arguments with respect to claims 1-16 have been considered but are moot in view of the new ground(s) of rejection.

Specifically, applicant's arguments with respect to newly submitted limitations included in independent claims 1 and 13 (see pages 10 and 11 of applicant's remarks) are persuasive but are moot in view of the new ground(s) of rejection. Applicant's arguments concerning the supposed differences in the limitations of the originally filed claims and the teachings of the applied prior art references (see pages 11-13 of applicant's remarks) are not persuasive. Applicant fails to distinguish the originally claimed invention from the prior art, since the distinguishing features of applicant's disclosure are not cited in the claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-9 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pre Grant Publication to Xiao et al., number 2002/0101636.

Regarding claim 1, Xiao teaches an optical node apparatus (Figures 3-6) comprising a through path coupler (Figure 6, element 626) having at least first and second outputs (corresponding to output ports 648 and 650), the through path coupler configured to optically connect to an input port (elements 644 and 646) for receiving an input optical signal and configured to provide a first through optical signal on the first output and a second through optical signal on the second output (Figure 6); a first optical filter (652a) for optically connecting to the first output port and configured to filter the first through optical signal; and a selective connector (optical switch 630) configured for enabling selective optical connection to an output of the first optical filter, wherein the second output port is configured to accept a second optical filter (652b) and the selective connector is configured to switch optical connection to an output of the second optical filter without any substantial disruption to an operation of the optical node apparatus (page 5, paragraphs 40 and 41). Xiao does not teach that the optical node apparatus is reconfigurable while in-service and comprises connections to permit an in-service upgrade from a broadcast architecture to a spectrally blocking architecture, permitting spectral wavelength reuse in subsequent portions of a network; and wherein the optical node apparatus comprises connections to permit in-service maintenance. However, these limitations are paramount to automation of the optical node apparatus. It would have been obvious to one of ordinary skill in the art at the time of the invention to automate the optical node apparatus of Xiao in the above manner, since it has been

held that broadly providing a mechanical or automatic means to replace manual activity which has accomplished the same result involves only routine skill in the art. In re Venner, 120 USPQ 192. The motivation would have been to improve the ease of use and maintenance of the apparatus.

Regarding claim 2, Xiao renders obvious the limitations of the base claim 1. Xiao also teaches that the second optical filter is an upgraded filter relative to the first optical filter (Figure 4 and page 3,paragraphs 20-26).

Regarding claim 3, Xiao renders obvious the limitations of the base claim 1. Xiao also teaches a drop coupler (608a, 608b) optically connected to the input port and outputting the input optical signal to the through path coupler via a through path and also outputting the input optical signal to a drop path (Figure 6); and an add coupler (610a, 610b) optically connected to receive the output of the first or second optical filter selected by the selective connector and optically connected to an add path for outputting an output optical signal to an output port (Figure 6).

Regarding claim 5, Xiao renders obvious the limitations of the base claim 3. Xiao also teaches a first variable optical attenuator (636) placed between the first optical filter and the selective connector; and a second variable optical attenuator (638) placed between the second optical filter and the selective connector (Figure 6).

Regarding claims 4 and 6, Xiao renders obvious the limitations of the base claims 3 and 5, respectively. Xiao also teaches that the selective connector is an optical switch (optical switch 630).

Regarding claim 7, Xiao renders obvious the limitations of the base claim 5. Xiao also teaches that the first and second variable optical attenuators are configured to be operated in a manner such that only one of the attenuators is disabled from attenuating at any given moment (Figure 6 and page 5, paragraph 43).

Regarding claim 8, Xiao renders obvious the limitations of the base claim 7. Xiao also teaches a combining coupler (654a, 654b) optically connected to the first and second variable optical attenuators as inputs and optically connected to the add coupler (Figure 6).

Regarding claim 12, Xiao renders obvious the limitations of the base claim 3. Xiao also teaches that the drop coupler is a first drop coupler (608a) and the add coupler is a first add coupler (610a), the optical node further comprising: a first circulator optically placed between the first drop coupler and the through path coupler (note uni-directional transmission lines of Figure 6); a second circulator optically placed between the first add coupler and the selective connector (note uni-directional transmission lines of Figure 6); a second drop coupler (608b) optically connected to the second circulator (Figure 6); and a second add coupler (610b) optically connected to the first circulator (Figure 6), wherein the first circulator is configured to direct optical signal traffic from the first drop coupler to the through path coupler and to direct optical signal traffic from the through path coupler to the second add coupler and the second circulator is configured to direct optical signal traffic from the selective connector to the first add coupler ad to direct optical signal traffic from the second drop coupler to the selective connector (Figure 6 and page 4, paragraph 38 – page 5, paragraph 43).

Regarding claim 13, Xiao teaches a fiber optic transmission system (Figures 3-6) comprising: a plurality of transmitters (such as transmitter 624, Figure 6, which is repeated for every dashed rectangle 550 in Figure 5) configured to transmit input signals; a multiplexer (element 302.1, Figure 3) connected to a fiber optic line, the multiplexer configured to multiplex signals from the plurality of transmitters to the fiber optic line (Figure 3); a demultiplexer (element 302.2, Figure 3) connected to the fiber optic line, the demultiplexer configured to demultiplex signals from the fiber optic line (Figure 3); a plurality of receivers (such as receiver 628, Figure 6, which is repeated for every dashed rectangle 550 in Figure 5); and one or more optical add/drop nodes of claim 3 (Figures 3 and 4, elements 304 and Figures 5 and 6, elements 550) placed between the multiplexer and the demultiplexer (Figure 3). Xiao does not teach that an optical node apparatus within the fiber optic transmission system is reconfigurable while in-service and comprises connections to permit an in-service upgrade from a broadcast architecture to a spectrally blocking architecture, permitting spectral wavelength reuse in subsequent portions of a network; and wherein the optical node apparatus comprises connections to permit in-service maintenance. However, these limitations are paramount to automation of the optical node apparatus. It would have been obvious to one of ordinary skill in the art at the time of the invention to automate the optical node apparatus of Xiao in the above manner, since it has been held that broadly providing a mechanical or automatic means to replace manual activity which has accomplished the same result involves only routine skill in the art. In re Venner, 120 USPQ 192. The

motivation would have been to improve the ease of use and maintenance of the apparatus.

Regarding claims 9,10 and 14,15 Xiao renders obvious the limitations of the base claims 3 and 13, respectively. Xiao also teaches that at least one of the first and second optical filters is a spectral blocking filter (at least one of the optical add/drop nodes includes a spectral blocking filter) configured to permit a subset of a spectrum of the input optical signal to pass through while blocking a complementary subset of the spectrum of the input optical signal, wherein the subset is a contiguous portion of the spectrum (page 1, paragraph 6 and page 3, paragraph 20).

Claims 11 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Xiao in view of US Pre Grant Publication to Moon et al., number 2003/0184843.

Regarding claims 11 and 16, Xiao renders obvious the limitations of the base claims 9 and 14, respectively. Xiao does not teach that the spectral blocking filter is a reconfigurable blocking filter. Moon teaches a reconfigurable blocking filter (Figures 1-3, 6-11, 17-24, and 27-29, abstract, page 1, paragraph 3, and page 11, claim 4). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the reconfigurable blocking filter of Moon in the optical node apparatus (fiber optic transmission system) of Xiao. The motivation would have been to selectively delete individual channels within the signal (Moon, page 1, paragraph 3 and Xiao, page 1, paragraph 6).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry Martin Blevins whose telephone number is 571-272-8581. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMB

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